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MORE THAN PROFESSIONAL



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HK-V200 E-light system

User manual





E-LIGHT System

: HK-V200

- MANUAL -

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I . Brief Introduction

IPL (Intense Pulsed Light) is a kind of light with high energy and broad wavelength, within the range from 530nm to 1200nm. Photothermic and photochemical action will be triggered by the radiation of IPL. On one hand, IPL will promote collagen reproducing and recombining which makes the skin more flexible and smooth. On the other hand, the light with long wavelength can easily pass through epidermis layer and will be absorbed selectively in priority by pathological pigments which will be destroyed by high heat, and get the effect of remove pigmentations, vascular lesions and unwanted hair.

1. Principle

Photothermolysis effect: As the pigmentation contents of the pathological tissue are much higher than normal skin tissues, after absorbing of the IPL, the temperature of them are higher than normal skin, then the pathological pigmentation or vascular tissues are destroyed without hurting normal skin.

Bio stimulation effect: IPL energy stimulates the collagen to reproduce and recombine, enhance getting the effect of lightening, rejuvenation, tightening pores and removing wrinkle.

2. Application:

1. Hair removal;
2. Skin rejuvenation.

- 3. Pigmentation, freckle;
- 4. Vascular, red face, red capillary, and bottle nose.

3. System Self-checking

The circuit of system entering the self-checking situation when the machine starts, leave the machine carry on the self-checking for 5-10 seconds, then continue the operation.

4. System Classification

Electric shock protection: Grade1 BF Grade

Corrosion prevention liquid: ordinary

Do not use the machine in the environment mixed of flammable narcotic and air or nitrogen oxide mixture.

5. Equipment Consist, Specification, & Accessory List

1. Equipment Consist:

1.1. Mainframe

- A. Power supply system
- B. Microcomputer system
- C. Monitor
- D. Cooling System

1.2. IPL Handpiece

- A. Intense pulsed light source, xenon lamp

B. Reflector and filter

C. Sapphire wave guide

1. Technique Specification

- Light source type: 3.5 times atmospheric pressure IPL xenon lamp, from Germany
- Light Energy: 15—50J/cm²
- Pulse Amount: 1-15
- Pulse width: 0.1ms—10 ms
- Pulse delay: 0.1ms-50ms
- Spectra: 530-1200nm
- Cooling: 0° C-15° C, adjustable
- Cooling: internal circulating water + cooling + wind cooling + semiconductor cooling
- Safety protection: Impedance test
- Spot size: 8×40mm²
- N.W.: 30kg
- Dimension: 440mm×510mm×485mm
- Voltage: 230V±10%, 50~60Hz

2. Accessory List

No.	Item	Unit	Qty	Remark
1	Main frame	set	1	in the main case
2	IPL Handpiece	pc	1	in the lateral foam box
3	Power Lead	pc	1	in the lateral foam box
4	Key Switch	pc	2	in the filter box
5	Goggles for Operator	pair	1	in the lateral foam box
6	Goggles for Patient	pair	1	in the lateral foam box
7	Spare Plugs & fuses	pc	2	in lateral foam box
8	Water funnel	pc	1	in lateral foam box
9	User Manual	pc	1	in the lateral foam box

II . Standard Treatment Process

2.1 Form filling

Fill in the blanks of the Client File, confirm the treatment program, and remind the client pay attention to some points before and after treatment.

2.2 Face cleaning

Clean the face with gentle face cream for 3 minutes.

Remind: clean the hands of operator and the handpiece with bromogeramine.

2.3 Preheating

Start the equipment after face cleaning; preheat for not less than 3 Minutes (without lighting the xenon lamp).

2.4 Shaving

Shave the unwanted hair of the treatment area(2 minutes).

2.5 Gel coating

Coating the gel evenly (2-3mm) on the skin.

Effect: light guide, cooling, anaesthetizing.

Attention: no coating on eyes, eyebrows, lips.

2.6 Eye protection

Operator: wear the safety goggles.

Patient: close the eyes, wear professional safety goggles or cover the eyes with eye patch.

2.7 Allergic test

Emit 2 or 3 light spots in the bottom of ears in safe parameter, observe for 3 minutes.

Effect: do not continue to operate if there is an allergic phenomenon.

2.8 Operation

Carry on the operation with a suitable parameter to the patient.

Attention:

2.8.1 Inform the patient that there will be a slight pricking in operation before operating, to avoid panic.

2.8.2 Start the operation with a low energy grade; adjust the parameters in operating while asking the feeling of the patient.

2.8.3 Move the light spot by one spot overlapping the upper 1/3 part of the previous spot.

No emitting one area repeatedly, otherwise may cause inflaming or burns.

2.8.4 The handpiece should touch the skin vertically, no over pressing or leaving the skin.

2.8.5 Observing the reaction of skin while operating.

2.9 Cold compress

Keep gel coating for 20 minutes after operation ending; carry out cold compress in obvious slight reddish reaction till reddish fading away.

2.10 Cleaning

Clean the gel with cold water, coat corresponding cosmetics.

2.11 Treatment Course

Skin Rejuvenation Program: 30-45 days/time (4 times/course)

Hair Removal Program: 2-3months/time (3times/course)

2.12 **Special reminding**

2.12.1 Ask the client before treatment: is there a allergic or not; is there a bad reaction before for similar operation; fill the Client File concretely. Adjust the parameters on the basis of full acquaintance concretely. Adjust the parameters on the basis of full acquaintance of the condition of patient. Inform the patient the possible reaction in operation before operating.

2.12.2 In large area treatment or long time continuous operating, the water inside the equipment will warm up and the handpiece will be hot, interrupt the operation to refresh the water or leave the water cool down to continue operating.

2.12.3 Refresh the circulating water in one month; use purified water or medical distilled water.

III. Operation Instruction

3.1 Before starting the machine

3.1 Accessories connecting:

3.1.1 Connect the hand-pieces, filters:

3.1.1.1. Put the IPL hand-pieces on the hanger

3.1.1.2. Connect the IPL handpiece:

Connect water pipes (2), signal wires (2, black-to-black, red-to-red), xenon lamp wire, and RF wire to the corresponding jacks on the backboard tightly.

3.1.2 Check the water holes of the backboard make sure the water outlet hole is plugged well.

3.2 Water infusing:

3.2.1 pull out the plug of the water inlet hole, insert the water funnel

3.2.2 infuse water till water spill out from the spillway hole.

3.3 Checking

3.3.1 Make sure there is no water leaking;

3.3.2 Make sure there is no moisture or wet for electricity connecting parts;

3.3.3 Make sure the key switch is in the off position;

3.3.4 Make sure the emergency stop switch is in the on position.

3.4 Starting the equipment

3.4.1 Connect the power cord, turn on the key switch;

3.4.2 Double confirm there is no leaking of water circulation, fold the protective cover by turning it right.

3.5. Debugging

3.5.1. Make sure water and electric circuit is correct connected; then turn on the power to start the machine.

3.5.2. Turn on the master power switch on the backboard;

3.5.3. Turn on the emergency switch (clockwise turn) in the front side of the mainframe

3.5.4. Turn on the key switch (clockwise turn);

3.5.5. Check is there any leaking of the water connectors.

3.5.6. If the above is checked OK, put the wire cover into the neck on the backboard then turn deasil to get fixed.

3.6. Operation

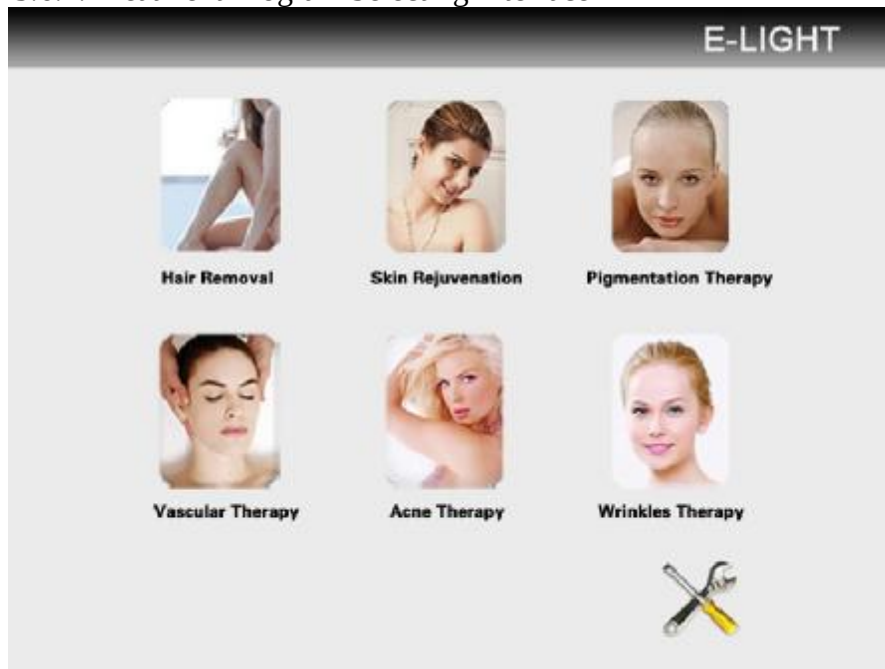
Enter operation condition after debugging and no abnormalities found.

3.6.1. Welcome Interface



Turn on the master power switch, the screen will show the loading interface .The self - drive system ends in 5 seconds, then click anywhere on the screen to go to the program selecting interface.

3.6.2. Treatment Program Selecting Interface



There are 6 treatment programs that could be selected:

- a. Hair removal
- b. Skin rejuvenation
- c. Pigmentation Therapy
- d. Vascular Therapy
- e. Acne Therapy
- f. Wrinkles Therapy

Select different treatment programs by clicking.

3.6.3. Treatment Program Operation Interface



 **Hair removal** current treatment program

   3 different groups of saved parameter setting.

Click , system will enter into the saved parameters of mode 1

 IPL energy display

Click  and  to increase or decrease IPL energy.

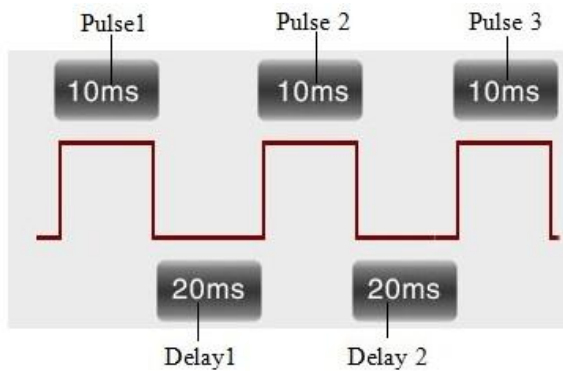
P. 12



RF energy adjusting



cooling degree adjusting



Pulse1: working time of the first pulse, 1-10ms adjustable.

Pulse 2 and Pulse 3: sub pulse width, 1-10ms adjustable.

Delay1: 1st pulse delay, interval between the 1st pulse and 2nd pulse.

Delay 2 and Delay 3: interval between two pulses.



RF working time, 50-2500ms adjustable.



Pulse amounts



Interval between two spots, 1-4s adjustable.



Back



Water capacity



lamp status



charging status



simmering indicator

0 0 0 3 3

counter of shots for the current treatment

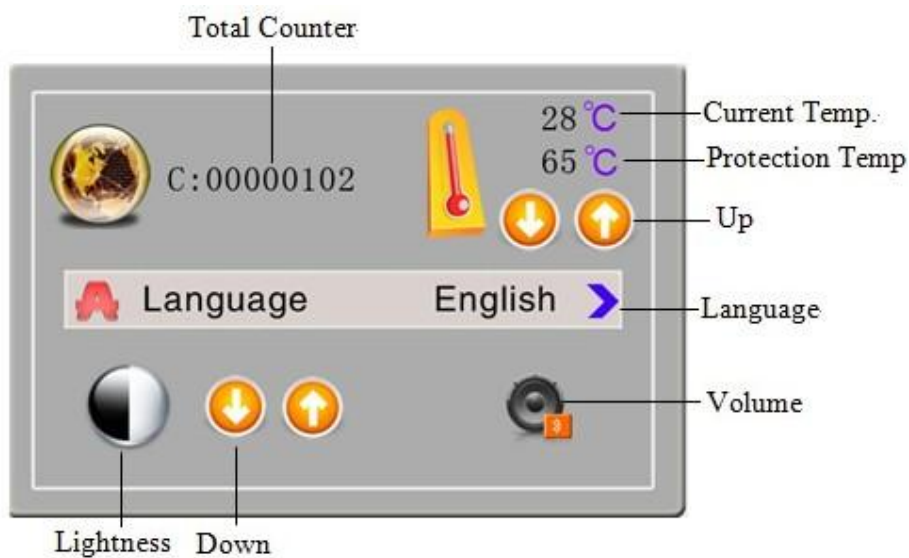
Ready

standby, click standby, the lamp will be lightened off. Click standby when treatment finish to turn off the handle

Standby

ready, click ready, the lamp of the handle will be lightened up, and light will be simmered by press the button on the handle

3.6.4 System Setting interface



3.7 Treatment Advice

3.8 Treatment Advice

3.8.1 Freckle, age pigment: strong pricking for the first treatment (under the tolerance of the operate). One minute after receiving emitting, there will be a slight reddish, which will fade away in 10 minutes, (for someone special, maybe 30 minutes). Punctuate pigment will appear on the surface of skin and will be metabolized in 3-7 days. The one-off curing rate of freckles by using IPL is 60%-80%, normally freckles could be cured in one course of treatment.

Parameter control: Long pulse width, short interval, medium energy.

3.8.2 Chloasma: Light pain, light reddish, redness disappear in 5 minutes. After radiation, the pigments become darker first in 10 days, and decline in 15 days. Don't adjust big parameter value to treat

Parameter control: Short pulse width, long interval, low energy.

chloasma. 1-2 treatment course needed for chloasma.

Parameter control: Short pulse width, long interval, low energy.

3.8.3 Epidermis spot: The most difficult one, so the treatment time is longer correspondingly. IPL+ is the best way of removing epidermis

spot. With the cooperation of using laser, 7-8 times radiation will cure the spot.

Parameter control: Long pulse width, short interval, medium energy.

3.8.4 Acne scar and other pigmentation: Patient would have a strong pain (under the limit of patient). Pigmentation will decline in 3-7 days.

Parameter control: Long pulse width, short interval, high energy.

3.8.5 Vascular, redness: Using high pulse width on the basis of easing the skin.

Parameter control: Long pulse width, long interval, suitable energy.

3.8.6 Bulky pore, black head, acne: Strong pain under the limit. Blackhead and oil come out in 2-3 days, and disappear in 7 days.

Parameter control: Long pulse width, short interval, high energy.

3.8.7 Winkle, pouch, black circle: Light pain.

Parameter control: Short pulse width, long interval, suitable energy.

3.8.8 Skin rejuvenation: Strong pain under the patient limit, reddish; redness disappear in 10 minutes. No suggesting repeat operation.

Parameter control: Long pulse width, long interval, high energy.

3.8.9 Hair Removal: Strong pain, follicular orifice will become a little reddish, with a burning smell. Caution for arms, lips, and legs hair removal, avoid pigmentation by over high energy. According to the growing period of hairs, growing period-maturation period-rest period, 3 times of treatment will remove the hair completely.

Parameter control: Long pulse width, long interval, suitable energy.

Special Attention:

For the sensitive and dark skin, there might be delayed reaction in

24-48 hours, therefore do not raise the energy casually. Adjust the parameter value according to the whiteness of skin. The whither, the higher endurance of the skin is. For dark skin, please pay more attention to use long interval and suitable energy of parameter value.

V . Safety Notice

4.1. Safety of IPL

The equipment takes maximum consideration of the safety of both operator and operate in the designing, the following are some safe measures of it:

3. Circuit self-checking after machine starting;
4. Using filter/light guide crystal, strong pulse light comes out only
5. Designed with independent safety circuit, electricity could be shut down automatically when the IPL power is to high;
6. Emergency stop switch, shut down the power in emergency;
7. Key switch to avoid starting the machine by any people;
8. Use high quality engineering plastic frame, preventing electricity creepage.

【Alarm】

All strong pulsed light device may cause hurt by improper handling. Operators should keep vigilant and take necessary protection measures according to the manual.

Patient: Carry out the treatment in the professional treatment room; take effective eye protecting measure;

9.

Operator: wearing protective glasses;

Treatment room: marked the treatment room clearly with in operating of IPL.

To ensure to the safe use of the equipment, please read the following instructions carefully.

1. No one except technician authorized by the manufacture could dismantle or repair the equipment, especially for the power source, handpiece; high voltage electricity inside;
2. Voltage rating: 220V;
3. Maintaining the equipment after disconnecting the power cord;
4. Keep the handpiece clean all the time; do not let the gel leaking into the handpiece;
5. In case leaking of the handpiece, do not start the equipment; already started, turning off immediately;
6. No emitting light to one area repeatedly, otherwise may cause inflaming or burns, and may leave pigmentation.

【Alarms of Strong IPL】

7. IPL may hurt the eye or cause burns or fire, take all necessary prevention measures before operating;
8. Emitting too much light to one part may burn the skin which may cause pigmentation;
9. Do not watch the IPL light directly from the handpiece even wearing protective glasses;
10. Do not emit the light to the air; keep the handpiece on the hanger when not using it.

4.2. Electricity & Machinery Safety

10. Keep all the boards closed, open the board may bring danger;
11. There is high voltage electricity inside, some parts still carry electricity even after turn off the power, therefore, do not dismantle the backboard without under supervising by our technicians;
12. Do not move the equipment by pulling the handpiece;
13. Do not use the equipment in inflammable and explosive environment;
14. Do not use alcohol or acetone before treatment;
15. Do not start operating before the handpiece dry enough after clean the handpiece or other parts of the equipment.

VI. TABOO

The following people are not suitable to be operated by the machine:

1. Pregnant, high blood pressure, heart attack, diabetic;
2. allergic to IPL;
3. Open wound parts;
4. People who could not avoid strong sun light;
5. Scar, birthmark, or mole higher than the skin.

VII. Attentions After Treatment

1. Not using irrigative makeup;
2. No hot water faces wash or sauna in 7 days;

3. No stimulating food or pageantry food as chocolate, coffee; no smocking; no drinking;
4. No scratch in case of scabbing;
5. Make a water replenishing care in 10 days.

VIII . Warranty Policy

The warranty of equipment is one year from the date of supply. During the warranty period, we undertake to repair free for the equipment supplied against all manufacturing and workmanship defects.

The standard of operation and environment should comply with the product specification and user manual.

The warranty does not extend to any equipment that:

- a. Malfunctions caused by abused operation
- b. Malfunctions caused by modification or repair by anyone except EASYLASER or not authorized by EASYLASER; from which EAYLASER original serial number tag or product identification markings have been altered or removed
- c. Malfunctions caused by other artificial factors like move or tear down in proper motion, or collision, etc.
- d. Malfunction caused by uncontrollable natural force
- e. Energy reduce caused by wet environment and dust
- f. Consumable parts of the equipment: hand-pieces.